

## REMARKS

This Amendment is in further response to the issues raised in the Examiner's Office Action mailed June 30, 1997. Applicants filed a Response to the Office Action on September 2, 1997 and had a telephone interview with the Examiner on September 23, 1997 during which the obviousness rejection and present amendments were discussed.

Claims 13-23, 26-34, and 39-42 were reviewed by the Examiner and rejected under 35 U.S.C. § 103. In this Amendment, claims 13, 33, 34, 39-42 are amended and claims 43-46 are added. Applicants respectfully request consideration of the above-referenced application in view of the following remarks.

The Examiner rejects all of the pending claims under 35 U.S.C. § 103 as being rendered obvious by the combination of Lee, et al. and Higuchi, et al. (1992). As discussed in Applicants' Response filed September 2, 1997, neither Lee, et al. nor Higuchi, et al. teach or suggest incorporating into an apparatus for monitoring amplification reactions in real time a detection and analysis mechanism which produces a plurality of corrected intensity signals as claimed in claim 13. These references also do not teach or suggest a method which includes the step of calculating corrected intensity signals which correspond to a relationship between the intensity of the first and second fluorescent signals at a given time. See Claims 39-42. In view of these distinctions over the prior art, the Examiner is respectfully requested to withdraw the present rejection for obviousness.

As discussed during the telephone interview with Examiner Horlick, Applicants amend independent claims 13 and 39-42 to specify measuring first and second fluorescent signals at a plurality of times during a nucleic acid amplification. Applicants note that the claims are intended to encompass producing a plurality of corrected intensity signals at some time during an amplification. An amplification can include one or more amplification cycles. The plurality of corrected intensity signals may occur more than once per amplification cycle, once per amplification cycle or less than once per amplification cycle, all of which are intended to fall within the scope of the claims.

As also discussed during the telephone interview with Examiner Horlick, Applicants also amend independent claims 13 and 39-42 to specify that each corrected intensity signal corresponds to a relationship between the intensities of the first and second fluorescent signals at a given time. As illustrated in Figure 4, this relationship may be a ratio between the first and second fluorescent signals. However, it is noted that a variety of mathematical relationships other than a ratio between the first and second fluorescent signals can also be

used to correct for system errors, all of which are intended to be encompassed within the scope of the claimed invention.

### CONCLUSION

Applicants earnestly believe that they are entitled to a letters patent, and respectfully solicit the Examiner to expedite prosecution of this patent application to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

Respectfully submitted,

Date: Nov. 10, 1997

By: David J. Wetz  
David J. Wetz  
Registration No. 38,362

650 Page Mill Road  
Palo Alto, CA 94304-1050  
(415) 493-9300